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algebraic equipment constitutes a firm basis for a superstructure of calculus? This is the only articulate objection that has found a voice. But the main obstacle is that most powerful force in educational matters—*vis inertiæ.*"

SUR UN PARADOXE ALGÉBRIQUE APPARENT

par G. LORIA, Université de Gênes, Italie

La contradiction signalée par M. Coolidge aux pages 184–5 de THE AMERICAN MATHEMATICAL MONTHLY de cette anneé peut se faire disparaitre de la manière suivante: Ecrivons l'equation

$$\begin{vmatrix} a & -b & c & -d \\ b & a & d & c \\ a' & -b' & c' & -d' \\ b' & a' & d' & c' \end{vmatrix} = 0$$

comme il suit

$$-\begin{vmatrix} a & -b & c & -d \\ a' & -b' & c' & -d' \\ b & a & d & c \\ b' & a' & d' & c' \end{vmatrix} = 0.$$

Appliquons a présent le théorème de Laplace sur le développement d'un déterminant et nous obtiendrons:

$$(ac' - a'c)^2 + (bd' - b'd)^2 + (ad' - a'd)^2 + (bc' - b'c)^2 - 2(a'b - ab')(c'd - cd') = 0.$$

ou bien, par des transformations algébriques faciles,

$$[(ac' - a'c) - (bd' - b'd)]^2 + [(ad' + bc') - (a'd + b'c)]^2 = 0.$$

Comme $a, b, \ldots$ sont toutes des quantités réelles cette équation unique se décompose dans les deux suivantes,

$$(ac' - a'c) = (bd' - b'd),$$
$$(ad' + bc') = (a'd + b'c),$$

qui sont précisément celles qu'a trouvees l'éminent professeur de l'Harvard University.

GÊNES, 28, VII, 1914.